

Work Order ID 143395

Monday, March 21, 2016 8:07:31 AM

143395

Page 1

Item ID: D4406-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Plate

Start Date: 4/11/2016 Start Qty: 4.00

4

Cust Item ID:

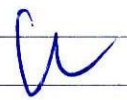
Required Date: 4/15/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: 

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D4406

D

105

0.00

105

Purchasing

Purchasing

Memo

ISSUE PO 31764
CUT PER DRWG D4406 REV. D

0.00

MAR 21 2016

DAS
13
9-89

115

Receive & Inspect for Damage & Mat'l Certs

0.00

115

Packaging

Packaging

Memo

0.00

4x 5016-047

125

QC5- Inspect part completeness to step on W/O

0.00

125

QC

Quality Control

Memo

0.00

P.T.O.

DQA: dh Date: 2016-10-7QA Closed: dh Date: OCT 03 2016

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only ☐

Work Order: <u>143395</u> Part No. <u>DY406-3</u> NCR No. <u>16-6076</u>	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Cross tube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☒</td> <td></td> </tr> </table>			Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☒																																																	
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Date : <u>16-04-18</u>	Step #: <u>105</u>	QTY Effective : <u>4</u>	MRB (QSI042) Approval DAS 9 9-89 <u>16-04-20</u>																																																																	
Description Work Order Deviation		Disposition																																																																		
found at inspection that some dimension are out of tolerance. See attach F.A.I. R.C. F.A.I. supplier / equipment		Scrap. + destroy.		Completed By DAS 38 9-89 <u>MAY 04 2016</u> Lead hand / Supervisor Approval Verification DAS 9 9-89 <u>16-05-03</u> QC / QA Coordinator Approval DAS 9 9-89 <u>16-05-03</u>																																																																
Root Cause <table style="width:100%;"> <tr><td>Environment ☐</td><td>No Re-verification ☐</td></tr> <tr><td>Design ☐</td><td>Operator ☐</td></tr> <tr><td>Doc/Data ☐</td><td>Offset/Setup ☐</td></tr> <tr><td>Equip/Tooling ☐</td><td>Supplier ☒</td></tr> <tr><td>Handling/Pre ☐</td><td>Training ☐</td></tr> <tr><td>Material ☐</td><td>Use for Testing ☐</td></tr> <tr><td>Internal Transport ☐</td><td>Poor Information ☐</td></tr> <tr><td>Tribal Knowledge ☐</td><td>Rushing ☐</td></tr> <tr><td>LOA ☐</td><td>Product Improvement ☐</td></tr> <tr><td>Substation ☐</td><td>Process Improvement ☐</td></tr> <tr><td>Past Expiry Date ☐</td><td>Manufacturing Process ☐</td></tr> <tr><td>Misidentified ☐</td><td>Past Due ☐</td></tr> </table>		Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☒	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	FAULT CATEGORY <table style="width:100%;"> <tr> <td>Pressure/Forced ☐</td> <td>Temperature/Cure ☐</td> <td>Power Loss/Surge ☐</td> <td>Positioned Wrong ☐</td> </tr> <tr> <td>Bending ☐</td> <td>Set-up ☐</td> <td>Folio/Program ☐</td> <td>Outside Dimensions ☐</td> </tr> <tr> <td>Centre Not Concentric ☐</td> <td>BOM/Route ☐</td> <td>Grain ☐</td> <td>Over/Under tolerance ☒</td> </tr> <tr> <td>Cracks ☐</td> <td>Broken/Damage/Defect ☐</td> <td>Weld ☐</td> <td>Part Incorrect ☐</td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave ☐</td> <td>Inspection Incomplete/Unqualified ☐</td> <td>Wrong Stock Pulled ☐</td> <td>Part Lost/Missing ☐</td> </tr> <tr> <td>Cuffs ☐</td> <td>Contamination ☐</td> <td>Out of Sequence ☐</td> <td>Part Moved ☐</td> </tr> <tr> <td>Crushing ☐</td> <td>Countersink ☐</td> <td>Off-set ☐</td> <td>Drawing ☐</td> </tr> <tr> <td>Heat Treat ☐</td> <td>Cut Too Short ☐</td> <td>Mislabeled ☐</td> <td>Finish ☐</td> </tr> <tr> <td>Wave/Twist in Tube ☐</td> <td>Instructions Incomplete/Unclear ☐</td> <td>Fit/Function ☐</td> <td>Misread ☐</td> </tr> <tr> <td>Marks/Chatter ☐</td> <td>Drill Holes ☐</td> <td>Misaligned/off center ☐</td> <td>Turning Sequence ☐</td> </tr> </table>			Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☒	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
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OTHER : ☐																																																																				

Work Order ID 143395***143395***

Page 2

Monday, March 21, 2016 8:07:31 AM

Item ID: D4406-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Plate

Start Date: 4/11/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 4/15/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130									
Small Fab	Memo	0.00							
Small Fab	Form as per dwg D4406								
140	QC5- Inspect part completeness to step on W/O	0.00							
140									
QC	Memo	0.00							
Quality Control									
150	Identify as per dwg & Stock Location: _____	0.00							
150									
Packaging	Memo	0.00							
Packaging	LOCATION: WA002								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
☐ OTHER : _____					

Work Order ID 143395***143395***

Page 3

Monday, March 21, 2016 8:07:31 AM

Item ID: D4406-3

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Plate

Start Date: 4/11/2016 Start Qty: 4.00

4

Cust Item ID:

Required Date: 4/15/2016 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00

160

QC

Memo

0.01

Quality Control

MLS MAY 04 2016
φ

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Page 1

Monday, March 21, 2016 8:07:30 AM

Work Order ID: 143395

143395

Parent Item: D4406-3

D4406-3

Parent Item Name: Plate

Start Date: 4/11/2016

Required Date: 4/15/2016

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A 14.04.09 DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4406-3P		Purchased	No				Each	0.0000		4			
D4406-3P									**				
Plate													
M304S18GA		Purchased	No				sf	269.4960		12.29474			
M304S18GA									**				

304/316 .050 Sheet

Location

Loc Qty

Loc Code

MAT020

269.496

M133328

171.996

M133587

97.5

m134604

DAS
13
9-89

APR 01 2016

4x sp16-04-7

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DART AEROSPACE LTD		Work Order: 143385
Description: Plate		Part Number: D4406-3
Inspection Dwg: D4406	Rev: D	Page 1 of 1

INSPECTION SHEET

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.561	+/-0.010	.551	✓			
0.30	+/-0.030					
0.88	+/-0.030					
0.13	+/-0.030					
0.31	+/-0.030					
24.995	+/-0.010					
47.958	+/-0.010					
54.178	+/-0.010					
2.43	+/-0.030	2.441	✓		PD1	
7.77	+/-0.030	7.77	✓		PD1	
7.203	+/-0.010					
3.63	+/-0.030					
4.00	+/-0.030					
7.071	+/-0.010	7.061	✓		PD1	
7.800	+/-0.010					
0.050	+/-0.010					
54.13	±.030	54.13	✓		tape	
47.96	±.030	47.96	✓		tape	
24.99	±.030	24.99	✓		tape	
7.163	±.010	7.152	✓			-.011"
7.86	±.030	7.855	✓		PD1	
.138	+.005 -.001	.130	✓		PD1	drain hole acc.
1.665/1.64	±.030	1.665	✓		PD1	
7.203	±.010	7.185		✓	PD1	-.018"
7.80	±.030	7.810	✓		PD1	
8.266	±.010	.261	✓		PD	

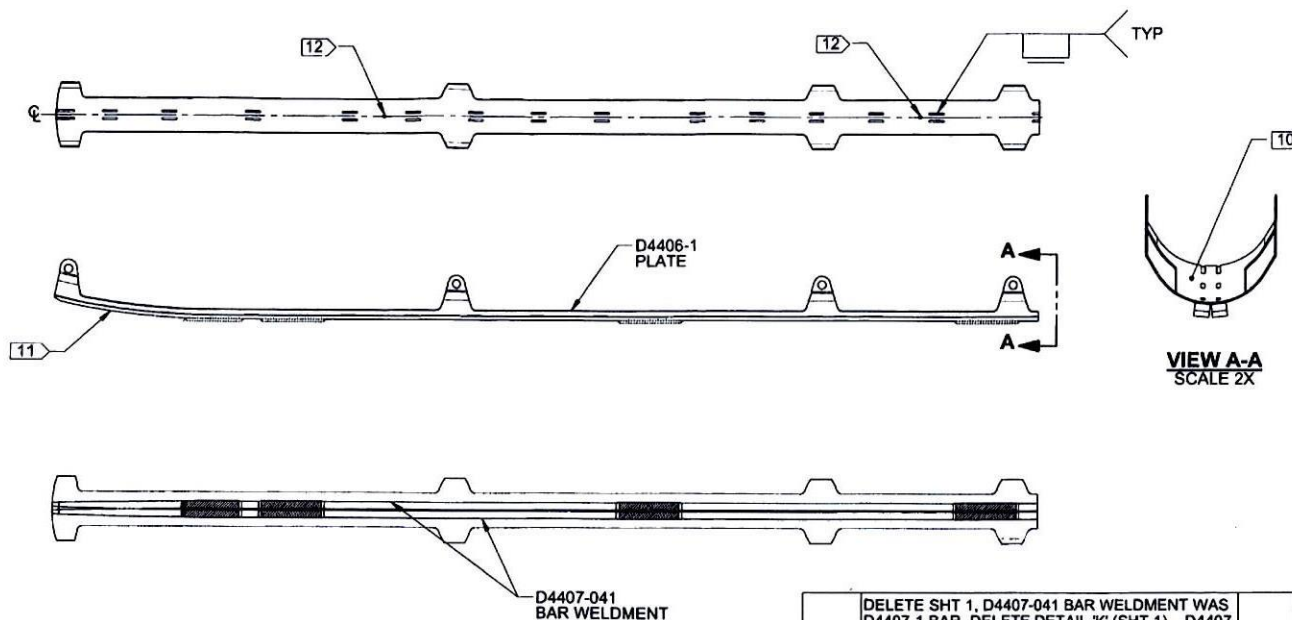
Measured by: 9	Checked by:	QC Inspector:
Date: 16-04-13	Date:	Date:

Engineering Approval: (If necessary)	Date:
--	--------------

Rev	Date	Change	Revised by	Approved
A	11.10.13	New Issue P/O D4406-043	KJ	
B	12.03.08	Dimensions revised per Dwg Rev B	KJ	
C	13.05.08	Dwg Rev updated	KJ	
D	16.03.17	Dwg Rev updated	KJ	

ITEM	QTY -041	P/N	DESCRIPTION
	X	D4406-041	FWD WEARPLATE ASSY
1	1	D4406-1	PLATE
2	2	D4407-041	BAR WELDMENT

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 143395 MLC
16-03-17



D4406-041 FWD WEARPLATE ASSY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 8.48 lbs
- 8) WELDING: PER QSI 004
- 9) N/A
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.020-0.040 THICK, PER DART QSI 005 4.9
- 11) FORM TO MATCH PROFILE OF D4406-1 AT TIME OF WELDING.
- 12) TRANSFER $\phi 0.188$ HOLES FROM D4406-1 TO D4407-041

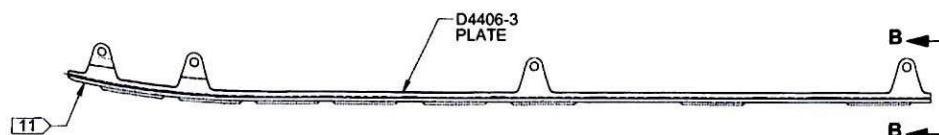
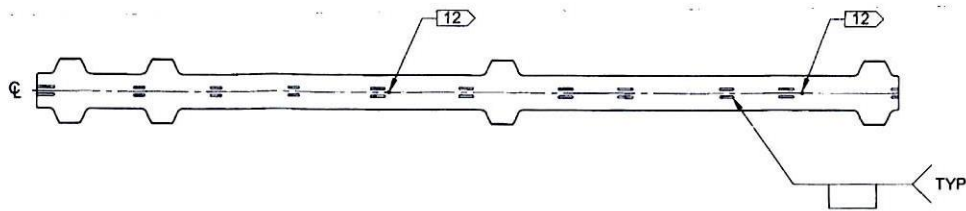
D	DELETE SHT 1, D4407-041 BAR WELDMENT WAS D4407-1 BAR, DELETE DETAIL 'K' (SHT 1), D4407-043 BAR WELDMENT WAS D4407-3 BAR, DELETE DETAIL 'L' (SHT 2), REMOVE NOTE 9 (SHT 1&2), NOTE 10; TEXTURED COATING WAS ROCKGUARD (SH 1&2), NOTE 12; D4407-041 WAS D4407-1 (SHT 1), D4407-043 WAS D4407-3 (SHT 2), REMOVE NOTE 13 (SHT 1&2)	DB	15.10.14
C	SHEETS 4 AND 5 HOLE SLOTS RE-PITCHED, SHT 5 FWD SLOT SIZES WERE 0.88 (REF NCR12-2031)	AJS	13.03.11
B	REVISE BILL OF MATERIAL; ADD NOTE 13/14 & REVISE NOTE 9 SHT 2&3; MODIFY DETAIL E & F (ZN B3-6, C2-6); ADD DETAIL G (ZN C7-6); REVISE D4406-3F TAB LOCATIONS (ZN B5-5)	RF	12.02.16
A	NEW ISSUE	RF	11.08.15
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D4406 WEARPLATE ASSY COPYRIGHT © 2011 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	
DRAWN	DB		
CHECKED	ML		
MFG. APPR.	DD		
APPROVED	WM		
DE APPR.	DS	REV. D SHEET 1 OF 5 SCALE NTS	
DATE	15.10.14		

RELEASED
2016-02-08
EEN 16-518

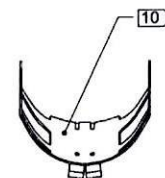
APPROVED

ITEM	QTY	P/N	DESCRIPTION
	X	D4406-043	WEARPLATE ASSY
1	1	D4406-3	PLATE
2	2	D4407-043	BAR WELDMENT

△ D



D4407-043
BAR WELDMENT



VIEW B-B
SCALE 2X

D4406-043 AFT WEARPLATE ASSY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.1
- 7) WEIGHT: 8.70 lbs
- 8) WELDING: PER QSI 004
- 9) N/A
- 10) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.020-0.040 THICK, PER DART QSI 005 4.9
- 11) FORM TO MATCH PROFILE OF D4406-3 AT TIME OF WELDING.
- 12) TRANSFER Ø0.188 HOLES FROM D4406-3 TO D4407-043

RELEASED
2016-02-08

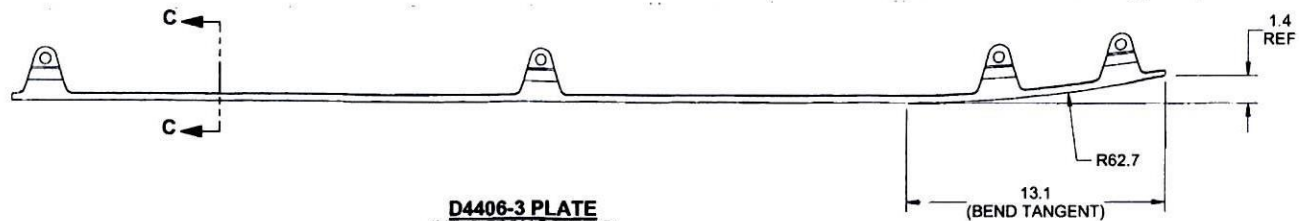
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DRAWN	DB
CHECKED	ML
MFG. APPR.	DD
APPROVED	WM
DE APPR.	DS
DATE	15.10.14

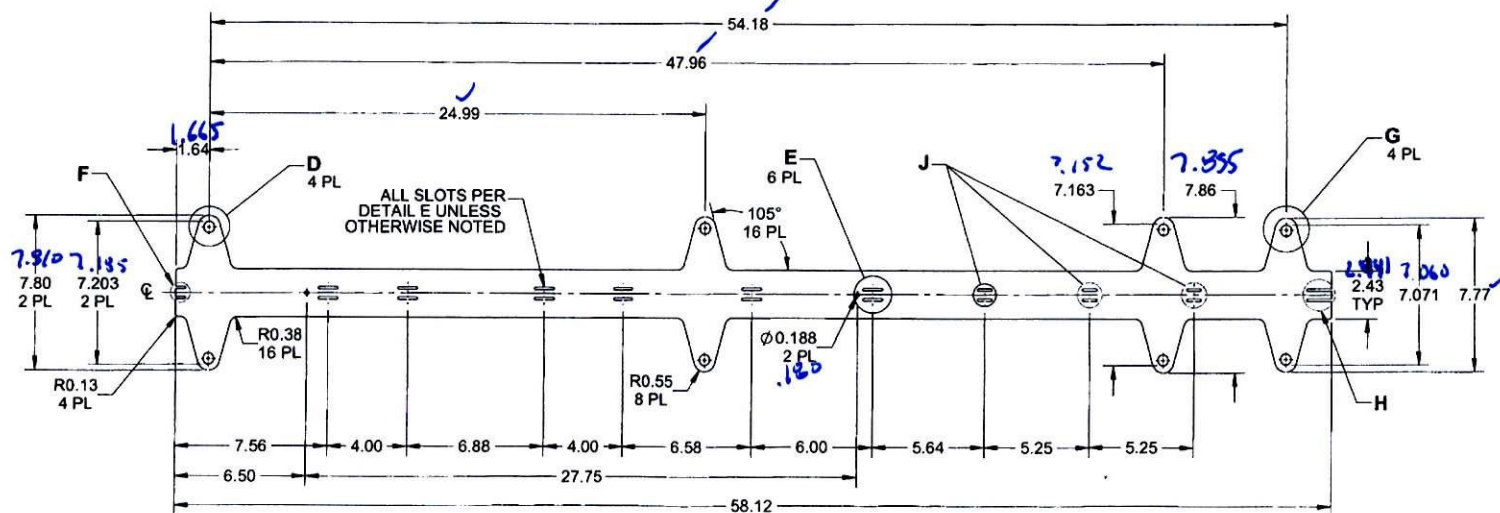
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D4406	REV. D
TITLE WEARPLATE ASSY	SHEET 2 OF 5
	SCALE NTS

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8 7 6 5 4 3 2 1



D4406-3 PLATE
(MAKE FROM D4406-3F)



D4406-3F FLAT PATTERN

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL SHEET, 0.050 THICK (18 GAUGE)
PER AMS 5513 OR 5524
OR ASTM A240 OR ASME SA240
REF. DART SPEC. M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 2.5 lbs

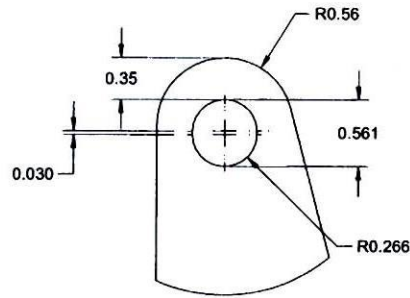
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2016-02-08

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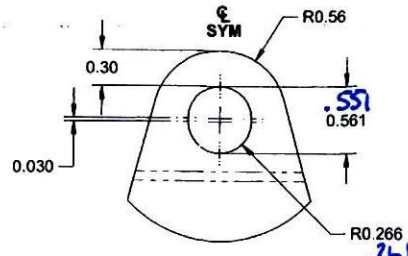
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DRAWN	DB		
CHECKED	ML	DRAWING NO.	REV. D
MFG. APPR.	DD	D4406	SHEET 4 OF 5
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	WEARPLATE ASSY	NTS
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8 7 6 5 4 3 2 1

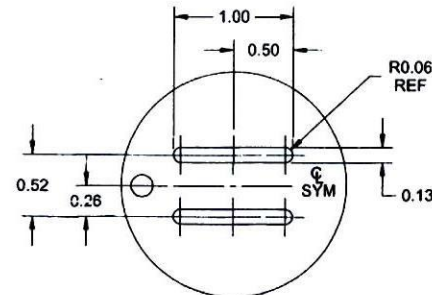
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537



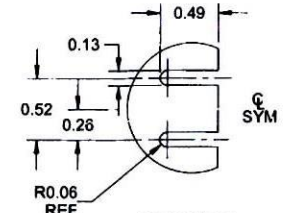
DETAIL G
SCALE 6X



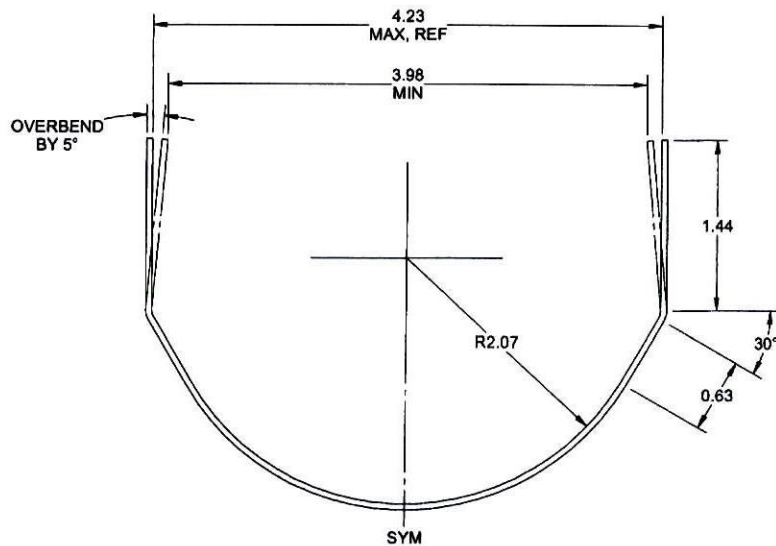
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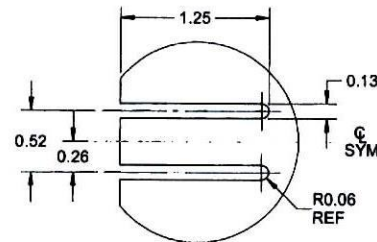
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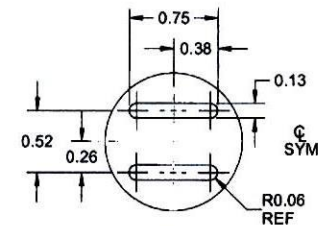
DETAIL F
SCALE 6X



DETAIL C
DETAIL TYP
SCALE 6X



DETAIL H
SCALE 6X



DETAIL J
SCALE 6X

RELEASED
2016-02-08

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DESIGN	RF	DART AEROSPACE LTD	
DRAWN	DB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	ML	DRAWING NO.	REV. D
MFG. APPR.	DD	D4406	SHEET 5 OF 5
APPROVED	WM	TITLE	SCALE
DE APPR.	DS	WEARPLATE ASSY	NTS
DATE		15.10.14	

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO31764**

Purchase Order Date 3/21/2016

PO Print Date 3/21/2016

Page Number 3 of 11

Order From :
TPI INDUSTRIES INC.
148 RUE GOODFELLOW
DELSON, QUEBEC J5B 1V4
CANADA

VC-TPI001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 450-633-0484

Ship To Contact
Ship To Phone
Ship Via:
Ship Acct:

Buyer Chantal Lavoie
Customer POID
Customer Tax # 10127-2607
Terms Net 30
Currency CAD
FOB Destination-Collect

Line Total: \$42.00

6 D3805-1P Plate 4/6/2016 8.00 \$21.25 \$170.00
Yes
4/6/2016 Each

CUT AS PER DWG D3805 REV. C
B142907
MATERIAL 304 SHEET 18 GA

Line Total: \$170.00

7 D4154-1P Plate 4/6/2016 8.00 \$34.80 \$278.40
Yes
4/6/2016 Each

CUT AS PER DWG D4154 REV. F
B143340
MATERIAL 304 SHEET 18 GA

Line Total: \$278.40

8 D4406-3P Plate 4/6/2016 4.00 \$27.30 \$109.20
Yes
4/6/2016 Each

CUT AS PER DWG D4406 REV. D
B143395
MATERIAL 304 SHEET 18 GA

Note:

3/21/2016

T.P.I. INDUSTRIES INC.

148 GOODFELLOW
DELSON, QUÉBEC J5B 1V4
CANADA
Tel: (450) 633-0484
Fax: (450) 633-0879

Packing Slip

Packing Slip No.: 7443
Date: 2016-04-05
Page: 1

Sold to:	Ship to:
Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada	Dart Aerospace Chantal Lavoie 1270 Aberdeen Hawkesbury, Ontario K6A 1K7 Canada
Order No.: 31764	Sold By: JONATHAN LESSARD
Shipped By:	Ship Date: 2016-04-05
Tracking No.:	

Item No.	Unit	Description	Quantity
d3805-1	Chaque	d3805-1 plate	8
d4154-1	Chaque	d4154-1 plate	8
d4406-3	Chaque	d4406-3 plate	4
d4771-1	Chaque	d4771-1 wearplate	4
d4772-1	Chaque	d4772-1 wearplate	4
d4773-1	Chaque	d4773-1 wearplate	4
d5152-1	Chaque	d5152-1 fwd post mount	28

Comment: Net / 30 from date of invoice 2% svc. chg. on invoices over 30 days

THYSSENKRUPP MATERIALS NA

DART AEROSPACE

STAINLESS STEEL SHEET 304L-2B DUAL GRADE
 .0480 Nom X 48.0000" X 96.0000"
 PART NO.

PO/Rel 31741

We certify that this is a true copy of the report
 furnished by the producer of the metal, or data
 resulting from tests made in approved labs.

Certificate of Mill Test Results

BL PEC-983229-004

21Mar16

Pg 1/1

Signed by: 



METALLURGICAL TEST REPORT

North American Stainless Canada Inc.
 740 Imperial Road North
 Guelph, ON N1K1Z3
 Canada

740 Imperial Road North

Certificate: 121787 1 Mail To:
 THYSSENKRUPP MATERIALS
 2821 LANGSTAFF ROAD
 CONCORD, ON L4K5C6

Ship To:
 THYSSENKRUPP MATERIALS
 2821 LANGSTAFF ROAD
 CONCORD, ON L4K5C6

Date: 12/08/2015 Page: 1

Steel: 304/304L

Finish: 2B

Corrosion: ASTM A262/14;1808end-OK

Your Order: PEC271093

NAS Order: WN 0072789 01

PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, C.R. ANNEALED & PICKLED. UNS 30400/30403
 ASTM A240/15a,A480/14b,A666/15;ASME SA240/13,SA480/13,SA666/13
 CHEM ONLY ON FOLLOWING ASTM: A276/13,A479/13a,A484/13a,A312/13
 CHEM ONLY ON FOLLOWING ASME: SA312/13,SA479/13
 AMS 5511H/5513J XMRK; MIL-5059D AMD3(X CRN MEAS); MIL-4043B
 NACE MR0175/ISO 15156-3:2009 A, MR0103/07;QSS766D-A X MAG PERM
 MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.
 EN 10204:2004 3.1; RoHS 1 & 2 Compliant
 Material is Free of Radioactive Contamination
 Steel Making Process: EAF, AOD, & Cont. Casting
 Product Mfg. by a Quality Mgt. Sys. in Conf. w/ISO 9001
 *Melted & Manufactured in the USA; Mat'l is DFARS Compliant

Product Id	Coil #	Skid #	Thickness	Width	Weight	-----Length-----	Mark	Pieces	Commodity Code
05X0L3 AA	05X0L3 A		.0460	48.0000	5.060	SHEETS	096.00	81	

Lab Accreditation Bureau, ISO/IEC 17025, Certificate# L2323

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) Chemical Analysis per ASTM A751/08

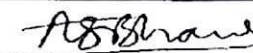
BEAT	CM	C %	CR %	CU %	MN %	MO %	N %	NI %	P %	S %
X0L3	US	.0214	18.0480	.4390	1.8095	.3690	.0812	8.0010	.0330	.0010
SI %										
.2980										

MECHANICAL PROPERTIES

Product Id#	Coil #	1 d o i c r	UTS KSI	20C .2% YS KSI	20C ELONG %-2"	% Hard RB	Tail Hard
05X0L3 AA	05X0L3 A	F T	99.26	53.12	48.68	88.00	87.00

NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
 Dept. Mgr.



AMT TEST BRNVE

12/08/2015